



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due
PO04/154	MCM001-VU	1	1	2% 10 Net 30	MDELIRIN R3.500W	Delrin Round Bar, White R3.500"				3	6/15/2018	3		S081851	Stock	6/18/2018	\$ 68.00 / ft	0	
		2			MT-BRASS-C360-R0.500	Brass C360 Round Bar 0.500"				6		6		S081852	Stock	6/18/2018	\$ 9.16 / ft	0	
		Total:									9		9						

Plex 6/18/2018 11:17 AM dart.Tollis Andrew

200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO040154**

Page 1 of 1

Order Placed By  
**Chantal Lavoie**

06/11/2018

McMaster-Carr Number  
**4799296-01**

Line	Product	Ordered	Shipped
1	8572K35 White Delrin Acetal Resin Rod, 3-1/2" Diameter, 3' Length <i>AT</i>	3 Feet	3
2	2572T38 Ultra-Machinable 360 Brass Rod with Certification, 1/2" Diameter, 6 Feet Long <i>AT</i>	1 Each	1
<hr/>			
Expected to ship			
3	2572T77 Ultra-Machinable 360 Brass Rod with Certification, 2-1/2" Diameter, 6 Feet Long	1 Each	1 Jul 2-9



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# **PURCHASE ORDER** **PO040154**

**Supplier:** MCM001-VU  
McMaster-Carr Supply Co,  
P.O. Box 7690  
Chicago, IL 60680-7690 USA  
Phone: 330 995 5500  
Fax: 330 995 9600

**PO No:** PO040154

**PO Date:** 6/11/18

**Due Date:** 7/11/18

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Lavoie, Chantal  
clavoie@dartaero.com

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground

**Pymt Terms:** 2% 10 Net 30

**Freight Terms:**

**Special Comments:**

## **Items**

Line Item	Job	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		MDLRINR3.500W M ✓	8572K35	Delrin Round Bar, White R3.500"	Firmed	6/15/18	3 ft	3 ft 3 ft	3 ft	\$68.00/ft M 19/06/18	\$204.00
2		MT-BRASS-C360-R0.500 M ✓	2572T38 6 FT	Brass C360 Round Bar 0.500"	Firmed	6/15/18	6 ft	6 ft 6 ft	6 ft	\$9.158333/ft M 19/06/18	\$54.95
3		MT-BRASS-C360-R2.500	2572T77 6FT	Brass C360 Round Bar 2.500"	Firmed	7/22/18	6 ft	0 ft	6 ft	\$117.94166/ft	\$707.65
4		91030A445	1/pk	Flange Nut receive ea	Firmed	6/15/18	10 Ea	0 Ea	10 Ea	\$3.51/Ea	\$35.10
5		92620A563	100/pk	Screw receive ea	Firmed	6/15/18	100 Ea	0 Ea	100 Ea	\$0.1269/Ea	\$12.69
6		98381A508	50/pk	Dowel Pin 3/16" X 3/4" (Mcmaster)	Firmed	6/15/18	50 Ea	0 Ea	50 Ea	\$0.156/Ea	\$7.80
7		RBE350A91-2381-01-13	5051K271 10 ft	Felt Pad w/ Adhesive Back	Firmed	6/15/18	10 ft	0 ft	10 ft	\$7.75/ft	\$77.50
8		RBE350A91-2381-01-21	1764A31	Folding Pull Handles	Firmed	6/15/18	8 Ea	0 Ea	8 Ea	\$7.20/Ea	\$57.60

Items											
Line Item	Job	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
10		MBRONZR2.250	8932K54 .54" per length	Bronze Round Bar 2.250" : MATERIAL: OIL IMPREGNATED SINTERED BRONZE ROUND BAR AS PER SAE 841 TYPE 1, CLASS A OR AMS 4805 OR ASTM B438 GRADE 1, TYPE 2 OR MIL-B-5687D TYPE 1, GRADE 1 receive ft	Firmed	6/15/18	2.16 ft	0 ft	2 ft	\$195.29629/ft	\$421.84
Line Item Note 4 pcs of .54" = 2.16 ft											
											Grand Total: \$1,579.13

## Order Notes

## Procurement Quality Clauses

A005 RIGHT OF ENTRY

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 DOCUMENT SPECIAL REQUIREMENTS

A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 6/18/18 10:40 AM dart.lavoie.chantal

**MUELLER BRASS CO.**

LOCATIONS:

 2199 LAPEER AVENUE  
 PORT HURON, MICHIGAN 48060

 302 ASHFIELD STREET  
 BELDING, MICHIGAN 48809
**Control No: 1048924****CERTIFIED TEST REPORT**

Sold: 00061711

 To: COPPER & BRASS SALES  
 ATTN ACCOUNTS PAYABLE  
 P O BOX #5116  
 SOUTHFIELD, MI 48086-5116

Ship: 00059225

 To: COPPER & BRASS SALES-  
 8001 THYSSENKRUPP PARKWAY  
 NORTHWOOD, OH 43619

 Cust PO: 5400402994  
 Cust Part: CURD00895  
 Type/Size: ROD RND 0.5000  
 Cust Spec: ASTM B16/16M-10

 MBCo SO: 486911 Ln 130 Cert Lvl: 2  
 Part Nbr: 3600047 FC  
 Qty Shpd: 10,693 UM: Lbs  
 BOL: 50702754 Shpd: 06/03/18
**Mechanical Properties**

Lot Number: 1703852		Temp r: H020 1/2 H		CDA Alloy: C36000	
Yield Strength ( )		Tensile Strength ( )		Elongation % in 2 Inches	
Hardness					

**Chemical Analysis ( % )**

	Cu	Pb	Fe	Zn					
ASTM B16/16M-10	60.0-63.0	2.5-3.0	0.35 Max	REM					
Lot Number: 1703852	61.3	2.6	0.17	REM.					

TOTAL OTHER ELEMENT MAX: .50

We hereby certify to the chemical and mechanical properties reported herewith and to the fact that they were determined in conformance with the specification noted above or any exceptions to this specification we have granted. We also hereby certify that the material furnished on this order is free from mercury contamination and that no mercury bearing equipment was used in the manufacture of these items.

**Melted and Manufactured in USA**

Conflict Minerals Compliant

 Produced in Compliance with:  
 EN10204 3.1  
 EU Directives:  
 2011/65/EU (RoHS 2 Compliant)  
 2000/53/EC
By: 
 James Tremp  
 Metallurgist

06/03/18

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MDELRIAR3500W  
 DATE: 18/06/18

PO / BATCH NO.: P0040154 / 508RS1

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 3ft  
 QUANTITY INSPECTED: 3ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.5"  
 THICKNESS RECEIVED: 3.5"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y N	
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y N	<u>P0040154</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>Ar</u> <span style="float: right; font-size: small;">DAS 8 9-38</span> DATE: <u>18/06/18</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : DELRIN II 150E OR ACETRON GP ACETAL

PART NUMBER : M-DELRIN-R2.DDD X COLOR CODE  
DIA

WHERE D.DDD = DIAMETER IN INCHES  
X = COLOR CODE, "W" = WHITE, OMITTED = BLACK  
EG. 1" BLACK ROUND BAR = M-DELRIN-R1.000  
2" WHITE ROUND BAR = M-DELRIN-R2.000W

RELEASED  
2010 MAR 27  
EJ 18-657

APPROVED

B	UPDATE DRAWING TO CURRENT STANDARDS, ADD MATERIAL COLOR - WHITE - ADD REFERENCE TO "ACETRON GP ACETAL" AS OPTION (REV. A1).	SAD	17.10.19
A	NEW ISSUE	DS	01.11.12
REV.	DESCRIPTION	BY	DATE
DESIGN	SAD		
DRAWN	SAD		
CHECKED	RF		
MFG. APPR.	RA		
APPROVED	HS		
DE APPR.	CP		
DATE	17.10.19		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
REV. B			
DRAWING NO. M-DELRIN-R			
SHEET 1 OF 1			
TITLE DELRIN ROUND BAR			
SCALE NTS			
DATE 17.10.19			
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THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING.			

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-BRASS-C360-RO.500  
 DATE: 18/06/18

PO / BATCH NO.: P0040154/5081852

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 6ft  
 QUANTITY INSPECTED: 6ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.5"  
 THICKNESS RECEIVED: 0.5"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	N	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	<u>P0040154</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>AT</u>	<u>DAS</u> <u>9</u> <u>89</u>	SIGNED OFF BY: _____	
DATE: <u>18/06/18</u>		DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



8 7 6 5 4 3 2 1

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	17-732	17.11.22	VM	WM

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:

C360 BRASS

SPECIFICATION:

ASTM B16

PART NUMBER:

MT-BRASS-C360-R-[D.DDD]

EXAMPLE:

WHERE D.DDD IS DIAMETER IN INCHES

MT-BRASS-C360-R-0.250

TOLERANCES PER MANUFACTURER SPECIFICATIONS

<b>DART</b> AEROSPACE		DRAFTING, QMVA, CANADA	
TITLE: BRASS C360 ROUND BAR			
DWG NO:		REV: A	
DESIGN BY:	VM 11/10/2017	XXX ± .005	FRACTIONS 1/16
DRAWN BY:	VM 11/10/2017	X ± .1	SURFACES ±1/4
CHECKED:	SAC 11/06/2017	1 DIMENSIONAL	1 DIMENSIONAL
MFG. APPR:	DE 11/10/2017	2 INTERPRET DIM AND TOL PER	1 DIMENSIONAL
APPROVED:	VM 11/10/2017	1 DIMENSIONAL	1 DIMENSIONAL
DATE:	11/1/2017	AFTER PLATING	
SCALE:	NTS	WEIGHT:	N/A LBS
SHEET 1 OF 1			
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